

DEFENSE PROGRAM OFFICE FOR MISSION ASSURANCE



Introduction to Critical Infrastructure Protection - FY04 -

(Briefer)

Briefing Classification:



“CIP”...It’s Been Around Awhile

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Carl Von Clausewitz

“Just as in commerce the merchant cannot set apart and place in security aims from one single transaction by itself, so in war a single advantage *cannot be separated* from the result of the whole ...”



Frederick The Great

“He who attempts to defend everywhere defends *nothing*...”



Napoleon

“...If you are forced to scatter your resources everywhere, you will not be strong *anywhere*...”



General George S. Patton

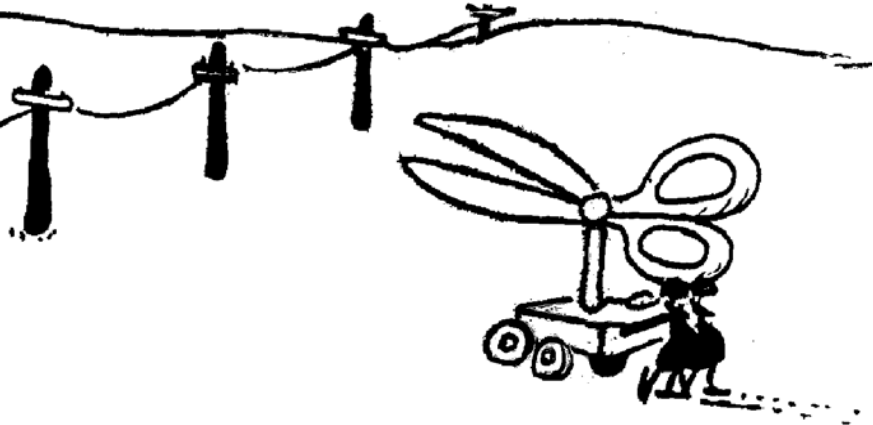
“The enemy’s rear is the happy hunting ground...
Use every means to get there...”



CIP... The Basic Concept

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What do
you suppose
they might be
up to Sir?





Agenda

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- ❑ **CIP Overview**
- ❑ **DPO-MA Overview**
- ❑ **A&A Methodology**
- ❑ **Process & Tools**
- ❑ **Status**
- ❑ **Conclusion**



New Logo

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Vulnerability & Threat Assessments

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Today's "**THREAT**" takes on many forms ...

Natural Disasters &
Self-Inflicted Threats



Cyber Threats



Asymmetric
Technology
Threats

Traditional
Threats



Infrastructure as a Target

... which may be applied to **Infrastructure**.



DOD CIP Objective

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What

**SIGNIFICANTLY REDUCE THE VULNERABILITY OF
ASSETS CRITICAL TO DOD MISSIONS, *USING A*
STRUCTURED, SYSTEMS / RISK BASED
*MANAGEMENT PROCESS***

How



Global CIP

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"Homeland"

Deter and Defend

- Air & Space Defense
- Land Defense
- Maritime Defense
- Critical Defense Infrastructure Protection

"Approaches"

Detect and Defeat

- Missile Defense
- Air Interdiction
- Maritime Interdiction

"Forward Regions"

Detect and Prevent

- Deterrence
- Preemption
- Assure Allies
- Threat Reduction

***Homeland Defense Requires Seamless Geographical
And Functional Integration***



CIP Legacy...

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- ❑ **OUSD(A&T) & JCS Establish Infrastructure Assurance Program – Jun 96**
 - Expands charter of JPO-STC to address infrastructure dependencies on commercial networks.
- ❑ **Executive Order #13010 - July 96**
 - Recognized vital national infrastructures, i.e., Gas, Electric power, Telecommunications, POL storage, and Transportation...
- ❑ **Quadrennial Defense Review - May 97**
 - Highlighted that adversaries may use asymmetric means to exploit DoD inherent vulnerabilities and reliance on commercial infrastructures.
- ❑ **Presidential Commission on Critical Infrastructure Protection - Oct 97**
 - “We should attend to our critical foundations before the storm arises, not after. Waiting for disaster will prove as expensive as it is irresponsible...”
- ❑ **Director, Joint Chiefs of Staff memo - Dec 97**
 - identify single points of failure (unique nodes in defense infrastructures) that support military operations
- ❑ **DoD Directive 5160.54 Critical Asset Assurance Program (CAAP) – Jan 98**
 - expanded asset assurance policy to support vital DoD missions across the full range of military operations
- ❑ **Defense Planning Guidance FY2000 – 2005 – Apr 98**
 - Set guidance for infrastructure protection for DoD.



CIP Legacy... (con't)

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- ❑ **Presidential Decision Directive #63 - May 98**
 - Established National Infrastructure Protection Program.



- ❑ **DoD Critical Infrastructure Protection (CIP) Plan - Nov 98**
 - DoD's response to PDD-63.



- ❑ **DEPSECDEF Memo Realigns CAAP Into CIP - Aug 99**
 - Integrated CAAP into CIP, and reassigned Executive Agent role from Army DOMS to OASD(C3I)



- ❑ **CJCSI 3110.01C Interim Guidance - May 99**
 - Updated JSCP to include addressing CIP in OPLAN, Appendix F of Enclosure C



- ❑ **CJCS Updates JOPES Volume II Planning Guidance – Jul 01**
 - Updated guidance to CINCs on format and structure of OPLAN CIP Appendix, I.e., Appendix 16 to Annex C.



- ❑ **Congress Authorized Establishment of OASD(HD) – Dec 02**
 - Mr. Paul McHale appointed first ASD(HD) – Mar 03

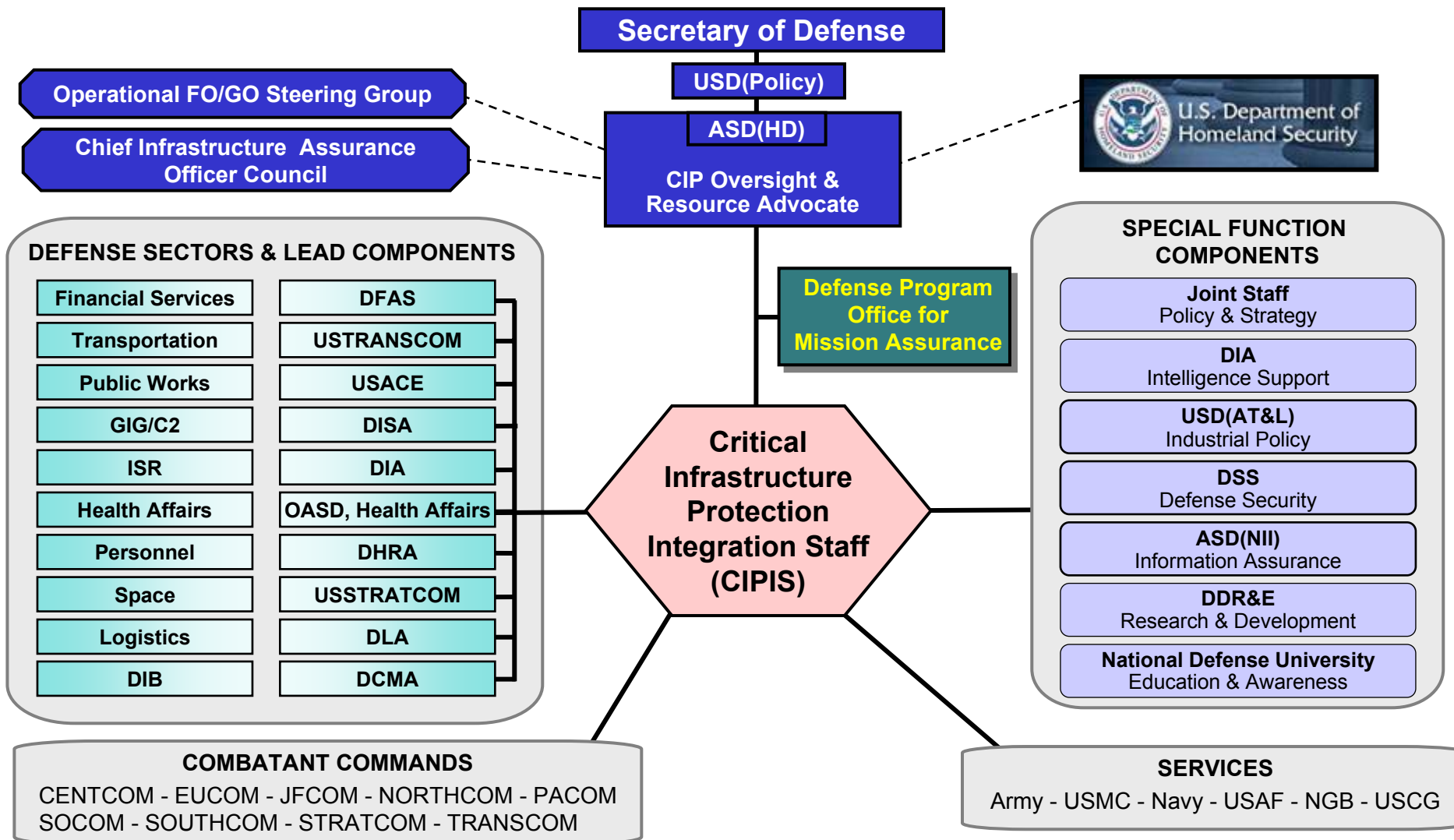


- ❑ **DEPSECDEF Memo Realigns CIP Oversight to ASD(HD) – Sep 03**
 - Transferred from USD(Intelligence)



DOD CIP Organization

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DOD CIP - Definition

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Critical Infrastructure Protection (CIP) is the identification, assessment, and security enhancement of physical and cyber assets and associated infrastructures essential to the execution of the National Military Strategy. CIP is a complementary program linking the mission assurance aspects of the Anti-Terrorism, Force Protection, Information Assurance, Continuity of Operations, and Readiness programs.¹



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Overview

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❑ **ASD(HD) Objective**

- Establish a DoD organization to centralize and facilitate programmatic, technical integration, and execution activities for DoD's CIP program

❑ **Charter**

- Interim signed by DoD CIP Director on 29 Aug 2003
- Designation signed by DASD-FPE 22 Oct 2003
 - Approved by NSWC (RADM Hicks) 31 Oct 2003

❑ **DPO-MA Role**

- Manage day-to-day activities of the DoD CIP program
- Provide the DoD with a comprehensive and integrated CIP capability
- Support the OASD(HD) in its role as the DoD CIP advocate



Mission...

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- ❑ **Provide DOD with a CIP Program that is organized, documented, and structured to implement concise OASD(HD) CIP Program Objectives.**
- ❑ **Provide direct support to the OASD(HD) in executing prescribed CIP responsibilities.**
- ❑ **Develop and maintain a CIP Program Budget across the Future Year Defense Plan (FYDP) to meet OASD(HD) CIP requirements and program objectives.**



...Mission

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- ❑ **Manage and coordinate CIP efforts across the Combatant Commands, Services, Defense Agencies, and other DOD entities in accordance with CIP Program Milestones and Objectives.**
- ❑ **Establish and maintain DOD CIP training, exercise, and education programs that enable DOD CIP readiness.**
- ❑ **Oversee the development and maintenance of CIP analytical tools, standards, and procedures to permit effective, DOD-wide infrastructure support analyses and assessments.**
- ❑ **Develop and maintain a comprehensive system to track and evaluate the CIP Program.**



Charter

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Provide Combatant Commanders, Military Services, and Defense Agencies mission planners with the ability to assess their mission dependencies on infrastructures and the potential impact on military operations resulting from disruptions to key infrastructure components.



Roles & Responsibilities

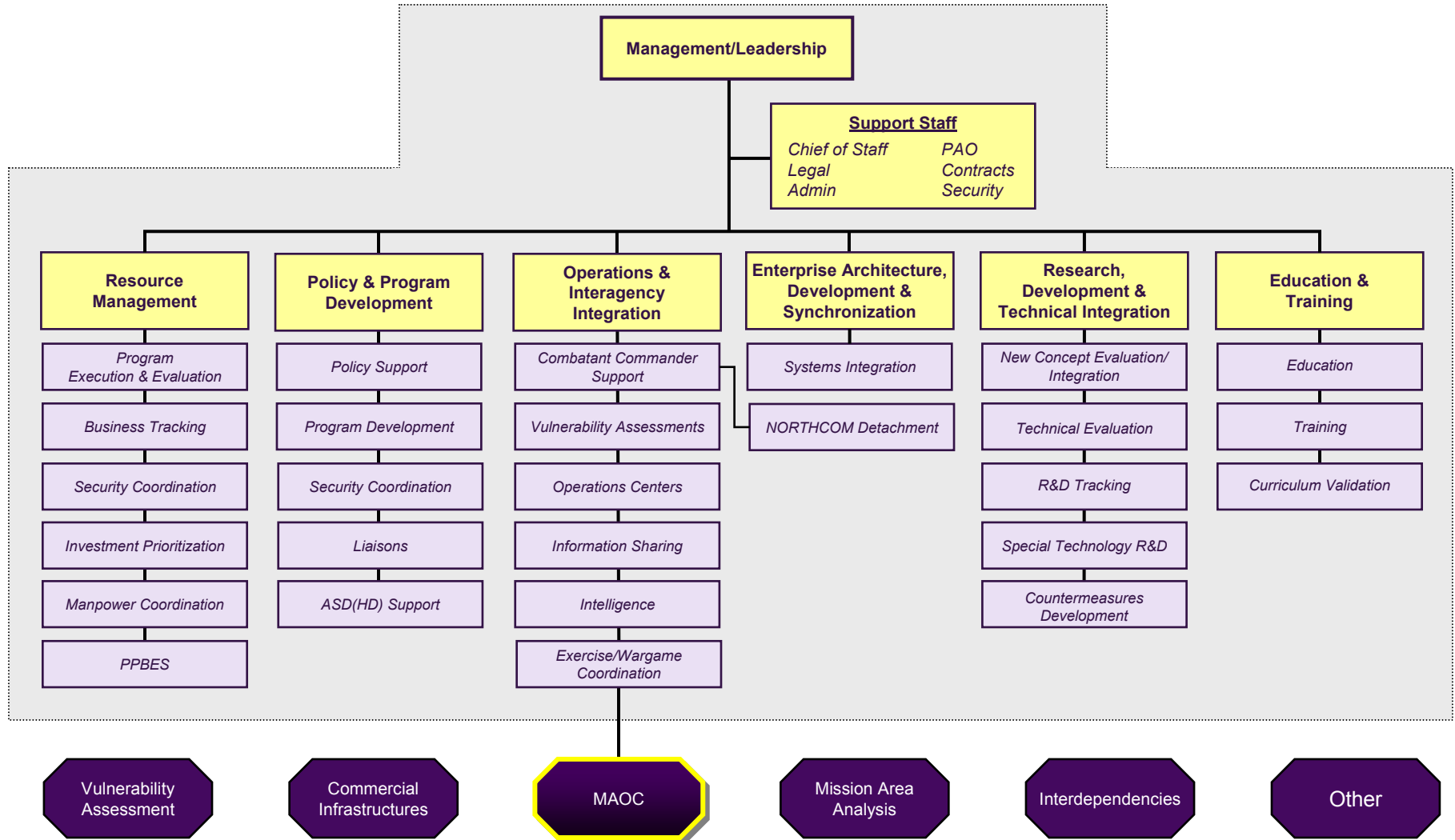
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- ❑ **Formalize the DoD CIP program**
- ❑ **Provide direct support to the OASD(HD) in executing prescribed CIP responsibilities**
- ❑ **Budget Formalization & Execution**
- ❑ **Cross Department Coordination**
- ❑ **Training & Education**
- ❑ **Tools, standards, and procedures to support analysis & assessment**
- ❑ **Measures to evaluate effectiveness**



DPO-MA Organization

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Mission Assurance Centers of Excellence



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Mission Assurance Philosophy

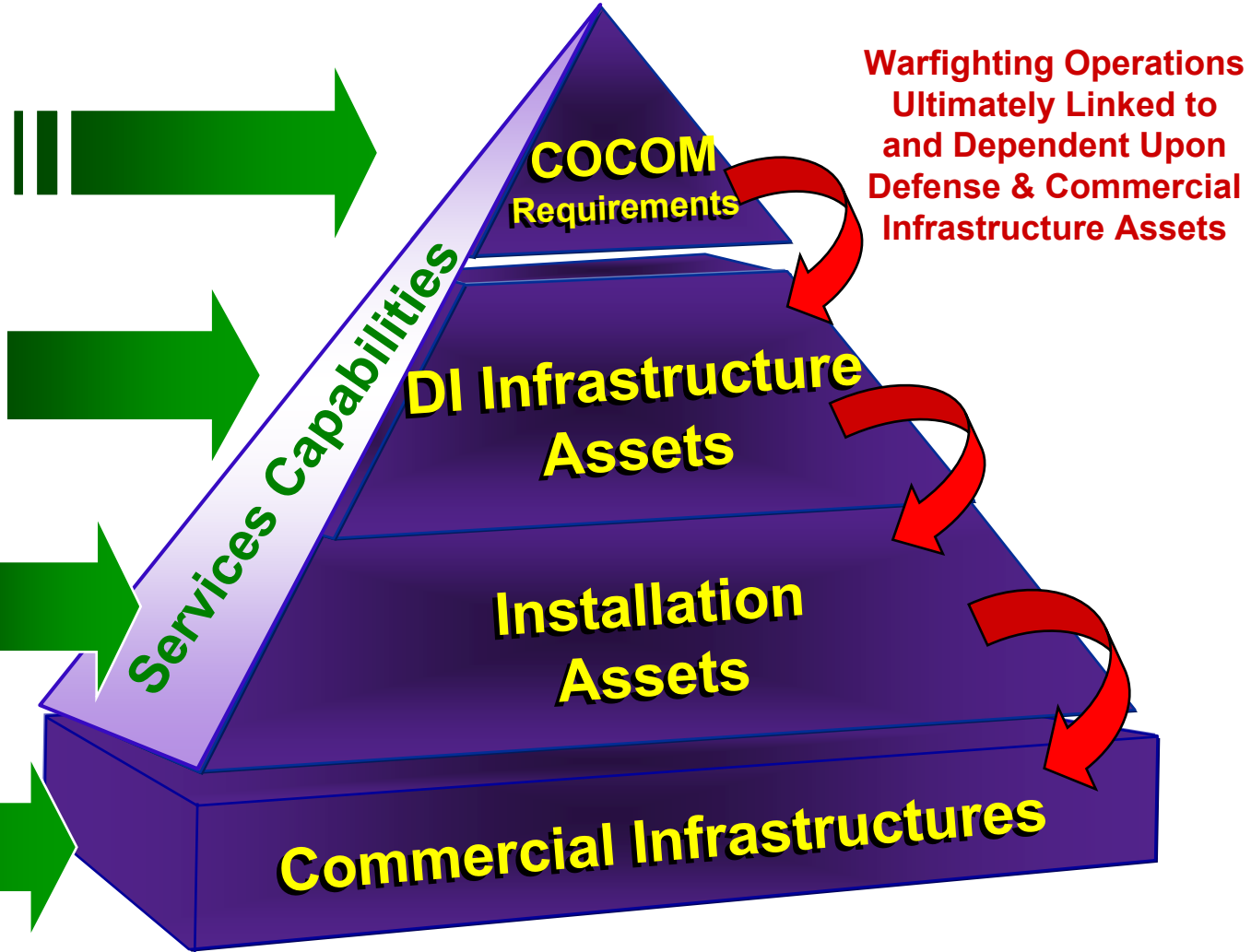
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Forces Are Deployed
and Operated IAW
Deliberate Planning
Process (OPLANs)

DoD Combat Support
Systems & Defense
Agencies

Assets Located At
Service Facilities &
Installations

Support
Services
Contracted
with Industry



Goal is Mission Assurance



Six CIP Activities

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Remaining CIP Activities

- Focus is on Risk Management

Reconstitution

Take Actions To Reconstitute Exposed Assets and Restore Capabilities

Incident Response

Respond to Incidents to Reduce/ Eliminate Risks to an Asset

Mitigation

Take Actions To Minimize Potential Impact of Exposure to Greater Risks

Monitoring & Reporting

Develop & Look for M&R of Critical Asset Exposure to Greater Risk

Remediation

Develop & Implement Short /Long Range Strategies to Reduce Risks

ID Assets Critical to DoD Missions & Vulnerabilities/Risks to those assets

Analysis & Assessment (A&A)

- Foundation of CIP Program
- Focus is on Risk Assessment



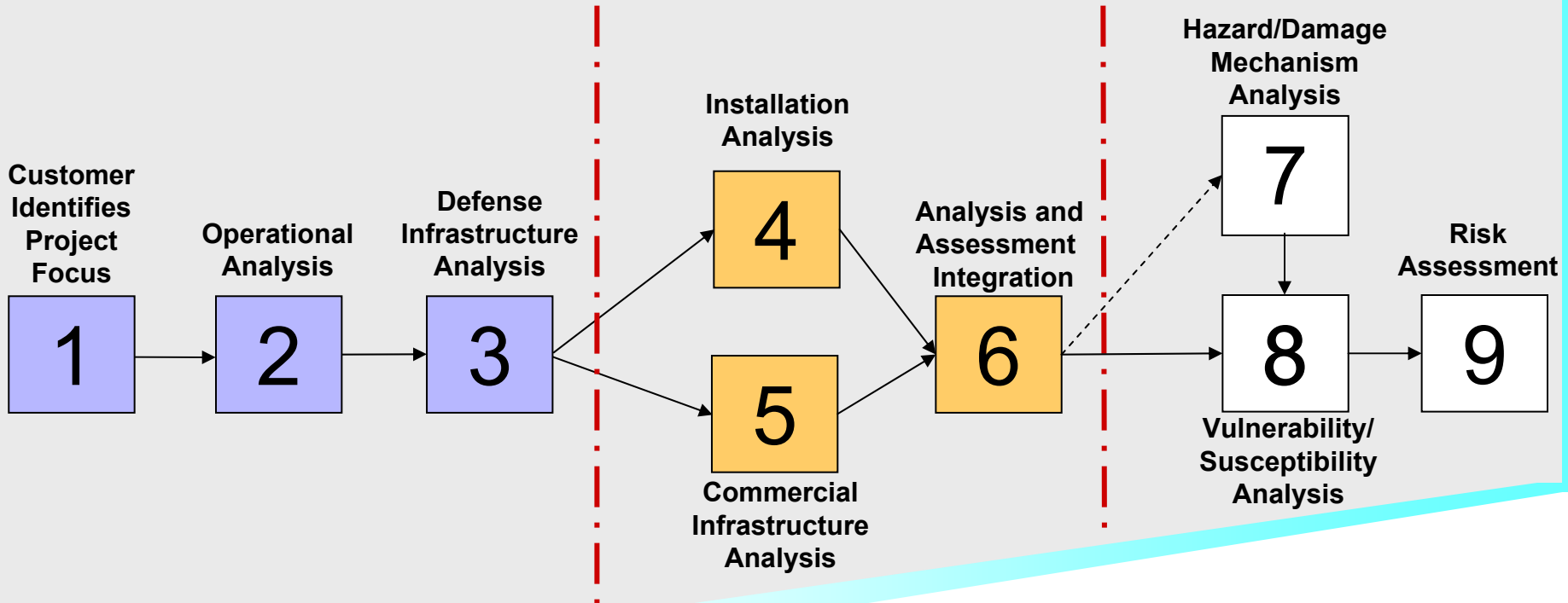
Previous CIP A & A Methodology

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What is critical?

Is it Vulnerable?

What can be done?



Pre-Event (Planning)

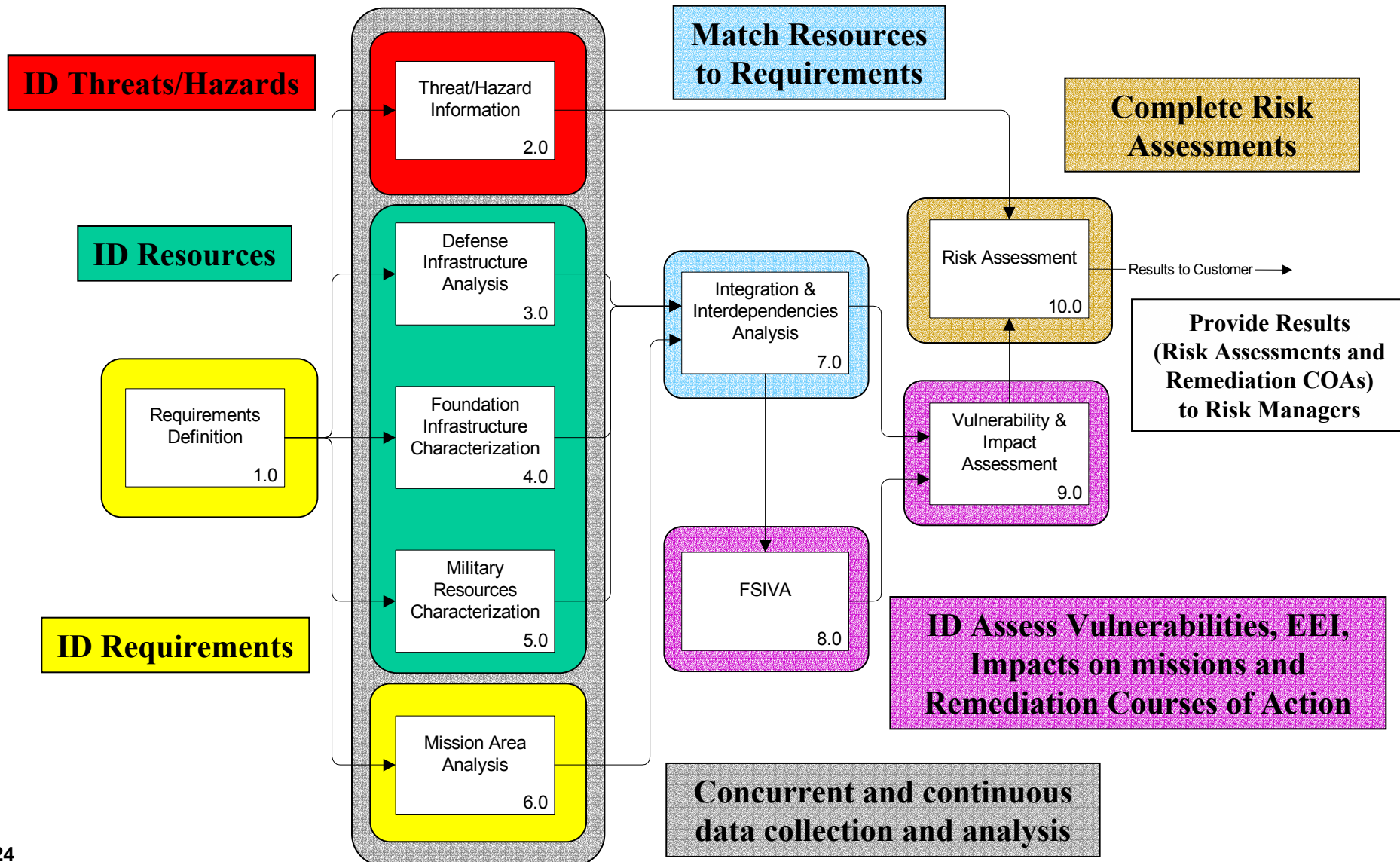
Post-Event (Action)





Revised CIP A&A Process

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Agenda

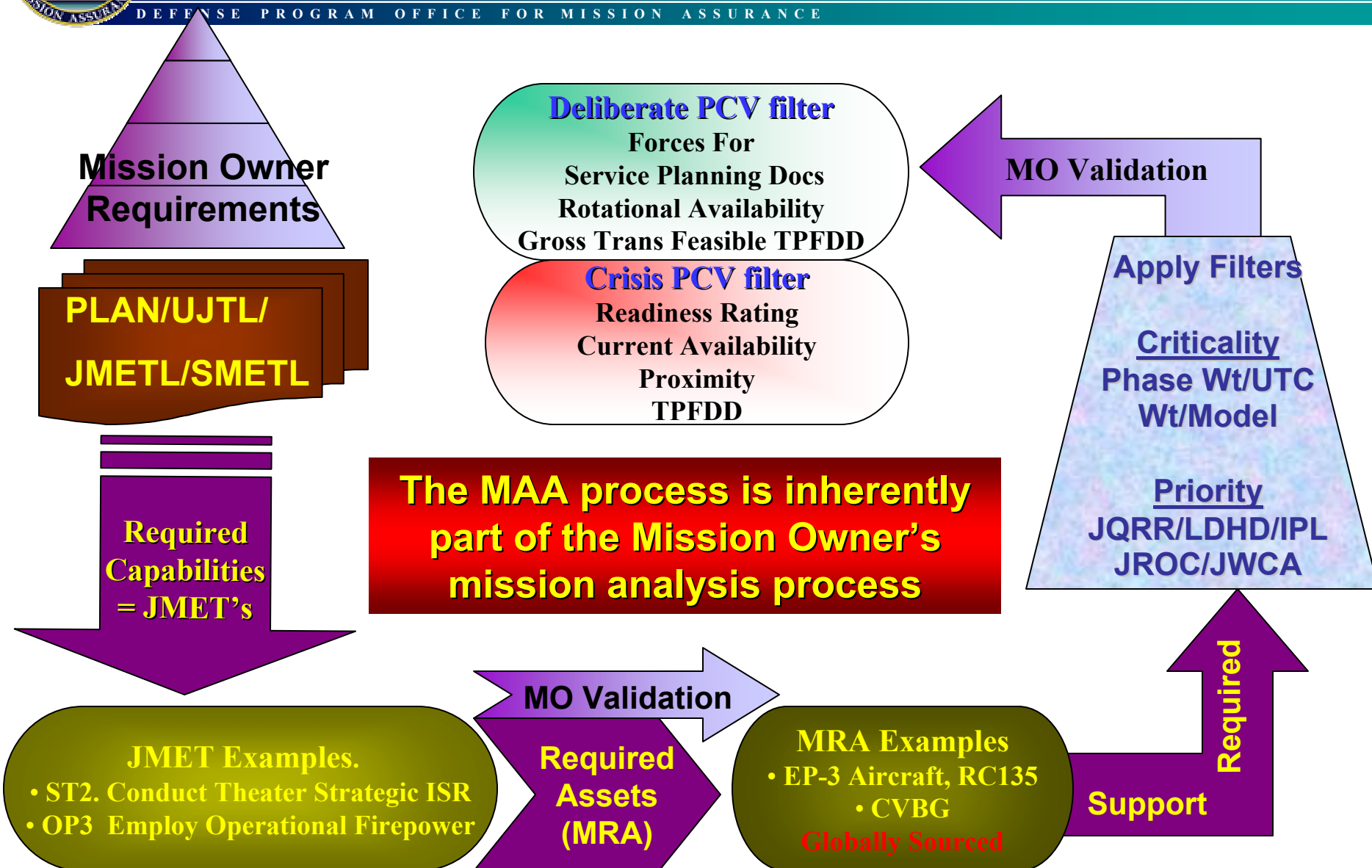
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Mission Area Analysis (MAA) to Support Adaptive Planning

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Continuity of Defense Infrastructures

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The image shows a stack of tables, each representing a different sector. The top table is titled 'Financial Services' and contains a detailed list of systems and their characteristics. The other tables are partially visible behind it, showing similar structures for other sectors.

SECTOR CHARACTERIZATIONS:

- ☒ Missions
- ☒ Functions
- ☒ Tasks
- ☒ Systems
- ☒ Sites



Financial Services



Transportation



Public Works



GIG/C³



ISR



Health Affairs



Personnel



Space



Logistics

*DIB (New)

Methodology & Structure Provided By DPO-MA



Site/Installation Mission Assessment

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- ❑ Conduct base and/or installation site visit
- ❑ Quantify mission-function-task-asset relationships
- ❑ Develop military operational dependencies, on-base and off-base



Site Or Regional Specific with Mission Focus



Commercial Links & Nodes

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- ❑ Characterize commercial infrastructures & identify critical assets
- ❑ Identify operational dependencies & supporting sites
- ❑ Assess operational impacts
- ❑ Provide options and recommended courses of action



Deployment – Logistics – Communications



Installations – Ports – Vital Industries

ENERGY



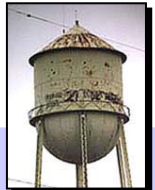
TRANSPORTATION



COMMS



WATER



Infrastructures

Site Or Regional Specific with Mission Focus

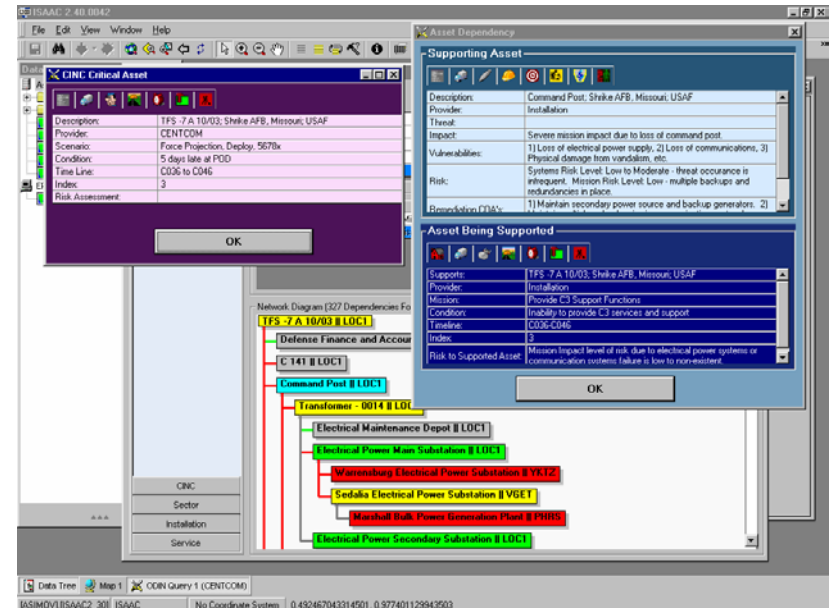


POST, CIP Database, & ODIN

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POST – Data Entry

ODIN – Info Visualization



Data Storage

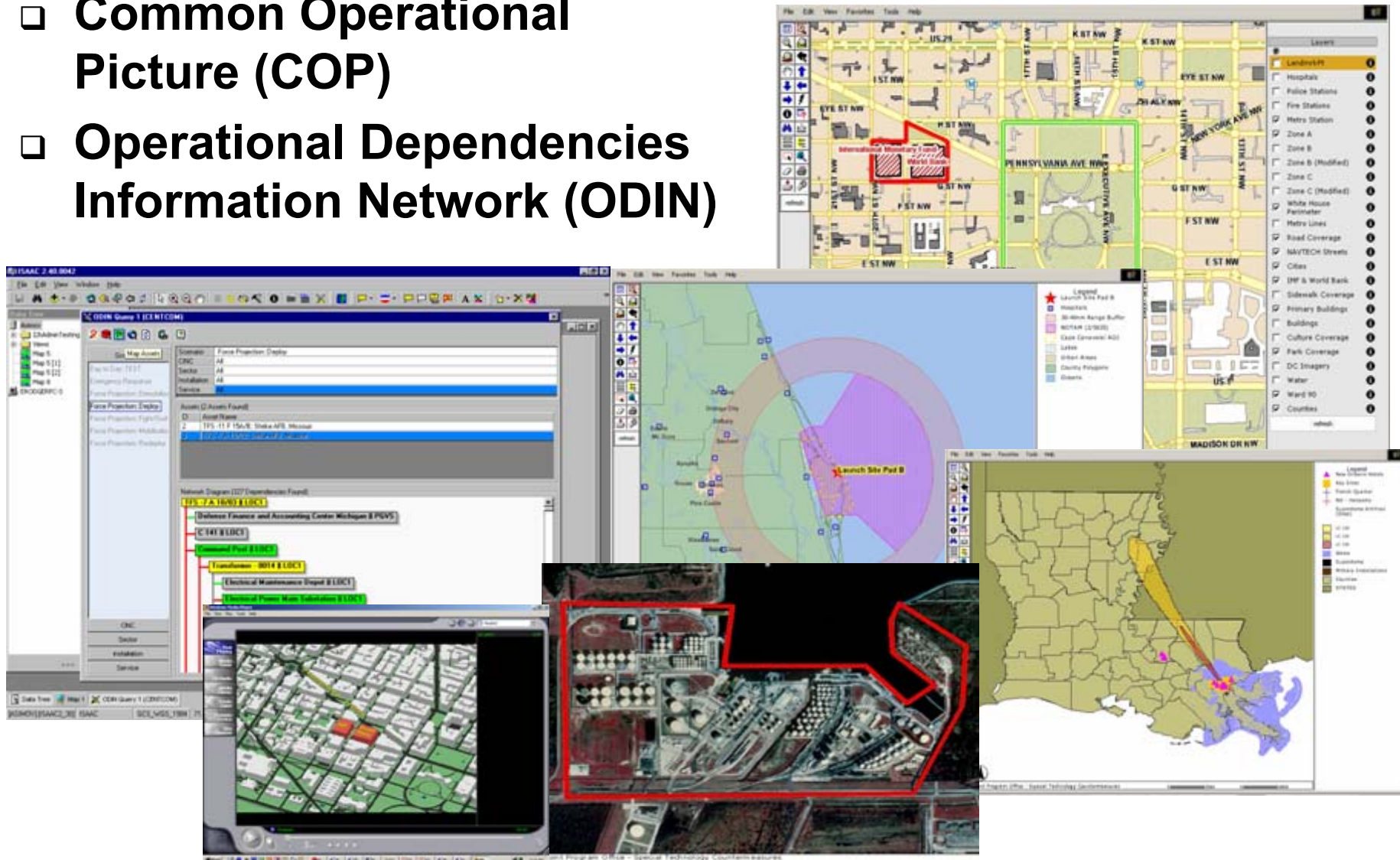
CIP
Database



Data Visualization Tools

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- ❑ Common Operational Picture (COP)
- ❑ Operational Dependencies Information Network (ODIN)

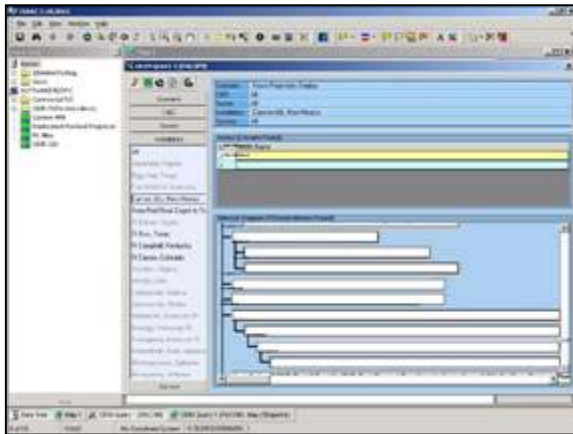




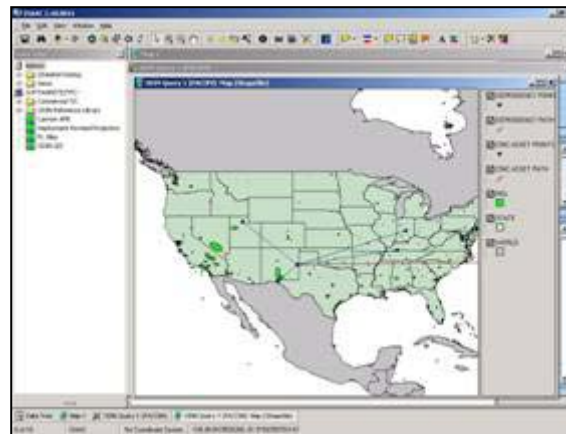
ODIN Perspectives

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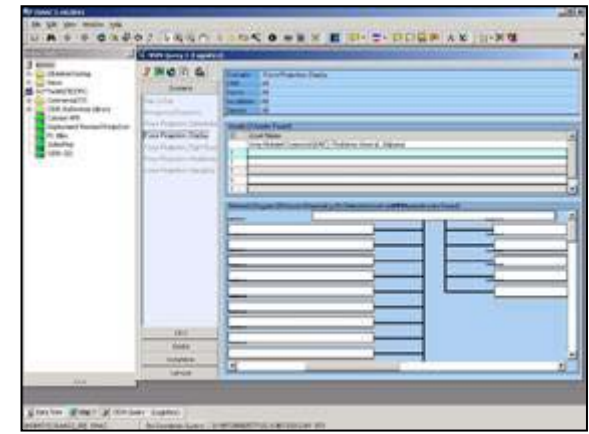
Visualizing The Dependencies:



**FUNCTIONAL
DEPENDENCY
STRUCTURE**



**GEOGRAPHICAL
DEPENDENCY
STRUCTURE**



**SUPPORTED &
SUPPORTING
DEPENDENCY
STRUCTURE**



Data Input and Dependency Linking

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- ❑ Web-based interface for data entry, manipulation, integration, and validation
- ❑ Pre-ODIN Staging Tool (POST)

The screenshot displays the "Assessment Maintenance" web interface. On the left, a sidebar contains "Data Management" and "Administration" tabs. The main area is divided into two panes. The left pane, titled "Assessment", includes a "Select Assessment Type" dropdown, a "Title" input field, a "Filter Assessment" button, and a list of assessment entries with a "max return: 500 records" limit. The right pane, titled "Assessment Results Maintenance", shows "Available Assessment Results" with a table listing assets, threats, and vulnerabilities. Below this, the "Assessment Results Maintenance" section contains fields for "Threat Type", "Vulnerability Type", "Vulnerability", "Threat", "Impact", "Risk", "Risk Level", "Status", and "Classification", each with a "max: 500" or "max: 1000" limit. A "Required" field is also present. At the bottom right, there are "clear", "delete", and "update" buttons.

Currently in use by PACOM in support of Appendix 16



Agenda

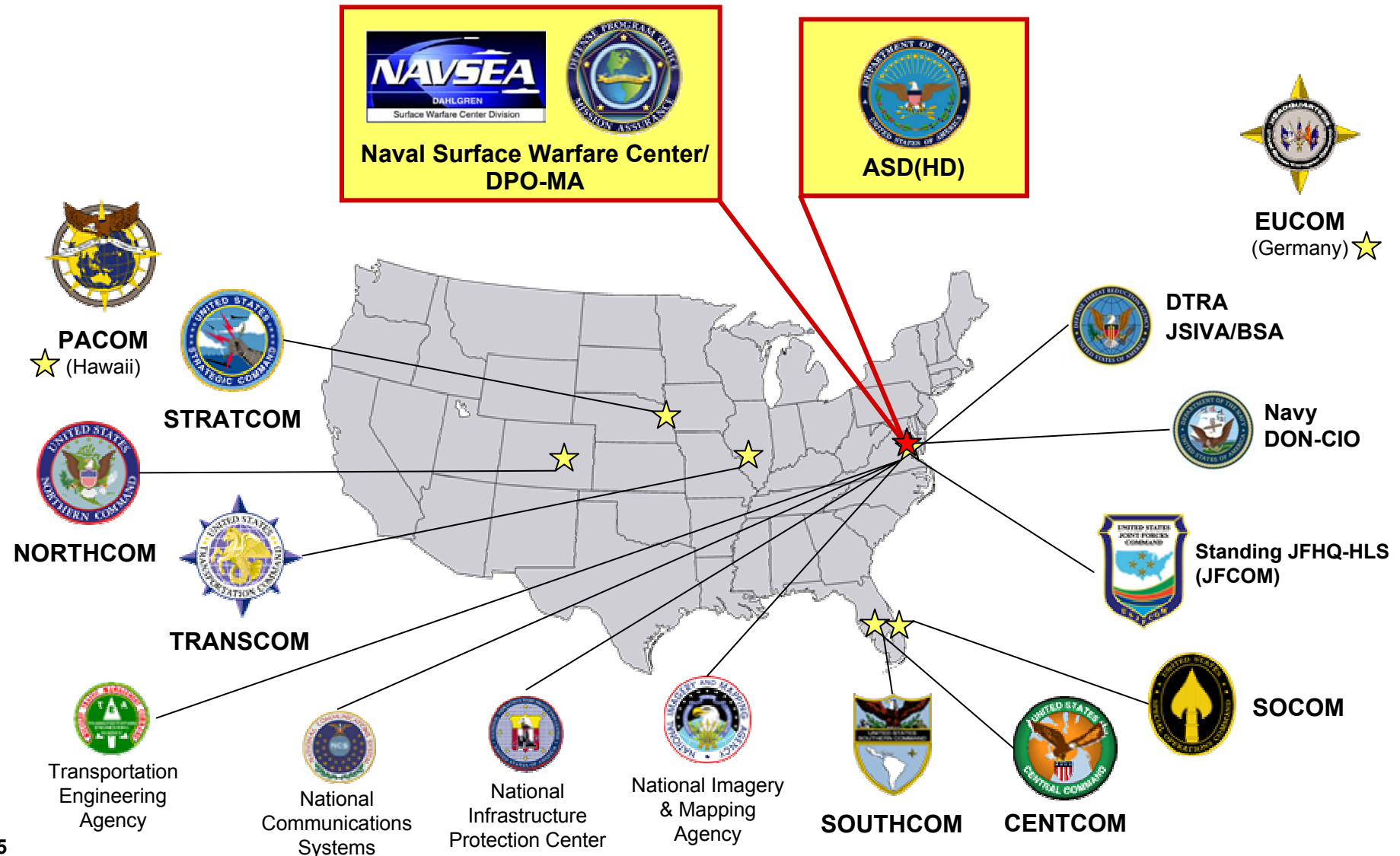
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DPO-MA Connectivity

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Relevance to Terms of Reference

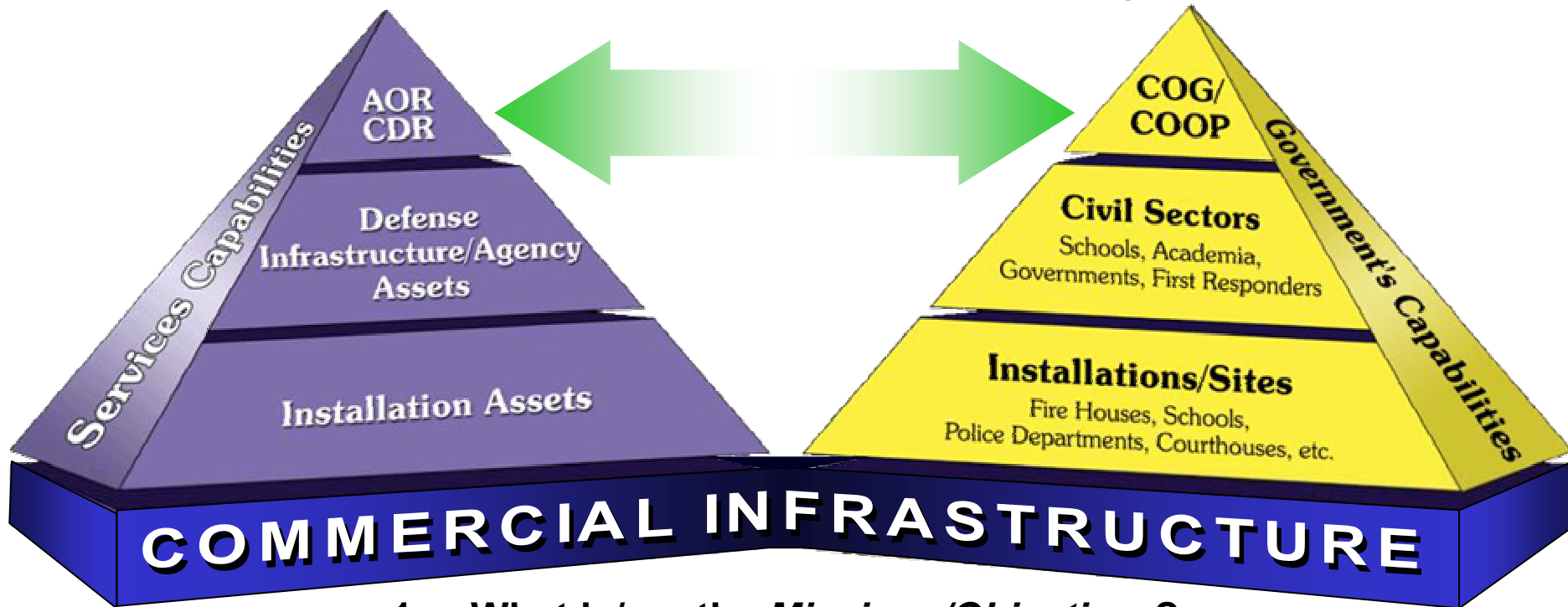
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DoD

- Tasking via OPLAN
- TPFDD Plan - Execution

Civil Arena

- Continuity of Government
- Continuity of Operations



1. What is/are the *Missions/Objectives*?
2. *What is critical* when, and to who?
3. Are there *vulnerabilities*?
4. *What can be done* to prevent / mitigate risk?
5. *How can we BEST* implement solutions?



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DOD CIP – Take Aways...

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- ❑ CIP is about ***mission assurance***
- ❑ CIP is about understanding ***interdependencies***
- ❑ CIP is about ***effects-based defense***
- ❑ CIP is global, from homeland ***support facilities*** to forward ***theater of operations***
 - Separating responsibilities based on geographic (domestic v. overseas) fails to recognize inherent interdependencies
 - Must treat CIP as a “system”
- ❑ CIP is an ***integrating activity*** to identify:
 - **What Is Critical?**
 - **Are Critical Assets Vulnerable?**
 - **What Can Be Done To Lower Risk?**
- ❑ CIP must be ***pro-active*** and ***dynamic***
- ❑ CIP must apply a ***risk-management*** methodology



Summary

DEFENSE PROGRAM OFFICE FOR MISSION ASSURANCE

- ❑ Understanding **operational dependencies** on **infrastructure** is critical to mission assurance
- ❑ **Criticality** and **priorities** must be driven by the warfighter
- ❑ **Value added** to the COCOM's, warfighters, Defense Infrastructures, and the Defense Agency, Military Service, and Installation asset owners
- ❑ The DPO-MA has **established** a **well proven** and officially recognized analysis and assessment methodology to answer:
 - What is critical? Is it vulnerable? and What can be done about it?
- ❑ **Demonstrated methodology** to comprehensively **link** specific operational plans to defense and commercial infrastructures
 - Provides decision makers a prioritized list of needed remediation decisions
 - Provides Combatant Commanders with a risk assessment of critical assets
- ❑ The DPO-MA is assisting the Combatant Commander's to **integrate mission assurance** into the Deliberate Planning Process

Goal: Full Spectrum Mission Assurance...



QUESTIONS?



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